CASSETTE CAR STEREO WITH
FM/AM ELECTRONIC TUNER

OWNER'S MANUAL

Thank you for purchasing this PIONEER product. Before attempting operation, be sure to read this manual.

Nous vous remercions d'avoir acheté cet appareil PIONEER. Avant de l'utiliser, prendre soin de lire ce manuel.

Muchas gracias por la adquisición de este producto PIONEER. Antes de tratar de operarlo, lea atentamente este manual.

شكرا لك على شرائك جهاز پايونير هذا. قبل محاولة تشغيله تأكد من قراءة هذا الدليل.

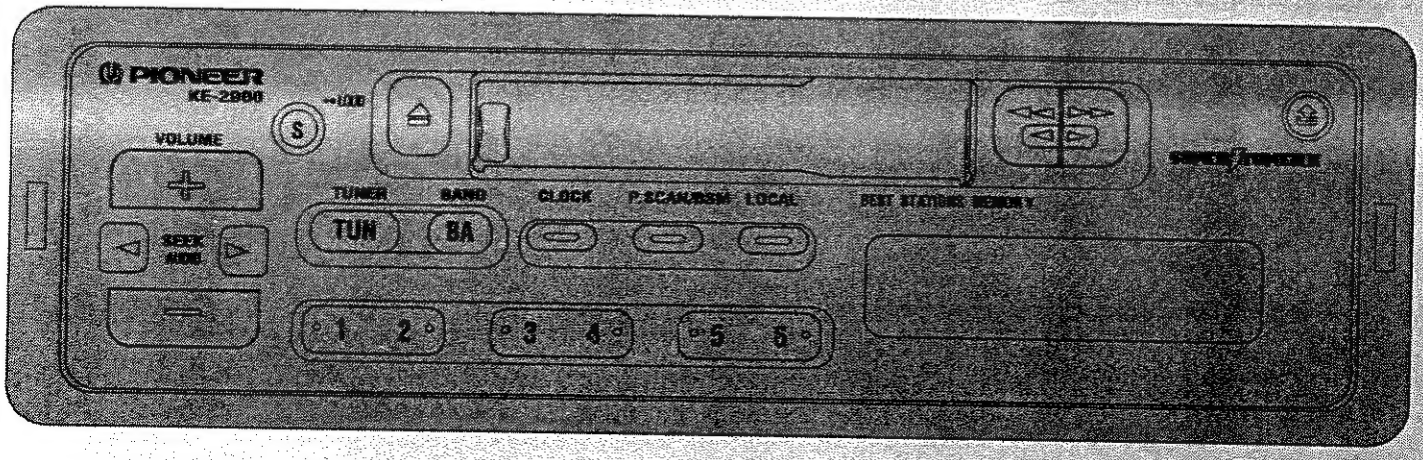
SUPER TUNER III

SPARE PARTS MASTER

PIONEER®

The Art of Entertainment

KE-2900



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Precautions

Note

- *If the car's battery is disconnected for any reason, the preset memory will be erased and must be reprogrammed after reconnection of the battery.*

In case of trouble
When the unit does not operate properly, contact your dealer or the nearest authorized PIONEER Service Station. Never remove the top case of the unit to attempt check or repairs.

Be Careful with Your Cassette

- *Do not try to eject the cassette immediately after insertion, as it may result in malfunction. Wait a few seconds.*
- *Be sure to eject the tape when the front panel is removed, or the vehicle's ignition is turned OFF. Leaving the tape in the unit can deform the pinch roller causing wow and flutter during tape playback.*
- *Do not use tapes longer than C-90-type (90 min.) cassettes. Longer tapes can interfere with tape transport.*
- *Loose tapes should be rewound with the aid of a pencil and unevenly wound tapes rewound with the use of the fast forward function.*
- *Storing cassettes in areas directly exposed to sunlight or high temperatures can distort them and subsequently interfere with tape transport.*
- *Store unused tapes in a tape case where there is no danger of them becoming loose or being exposed to dust.*

Cleaning the head

If the heads become dirty, the sound quality will deteriorate and there will be sound dropouts and other imperfections in performance. In this case, the head must be cleaned.

When using a cleaning tape, play it once on one side for normal cleaning. Excessive use of the cleaning tape will increase head wear. Be sure to read the cleaning tape instructions before use.

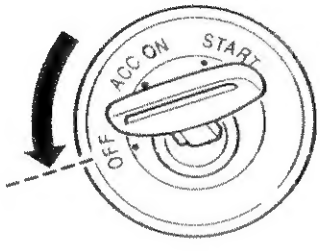
Changing the Tuning Steps

Changing the AM tuning steps

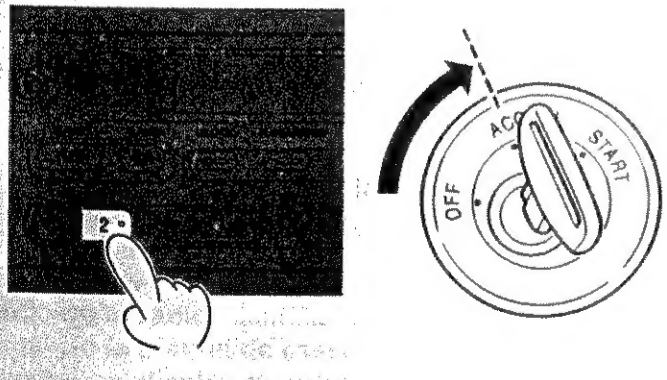
The tuning steps of the AM band for this unit can be switched between 9 kHz and 10 kHz per step. The tuning step should be switched from 9 kHz (which is preset at the factory) to 10 kHz when this unit is used in North America, Central America or South America.

1.

Set the ignition switch to the OFF position.



2.



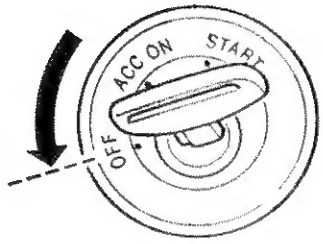
While pressing the button, set the ignition switch to the ACC or ON position.
Remember that changing the tuning steps also deletes frequencies stored in the tuning memories.

	Specification	Initial setting	New setting
AM	Tuning steps	9 kHz steps	10 kHz steps
	Frequency range	531 — 1,602 kHz	530 — 1,710 kHz

Changing the FM tuning steps

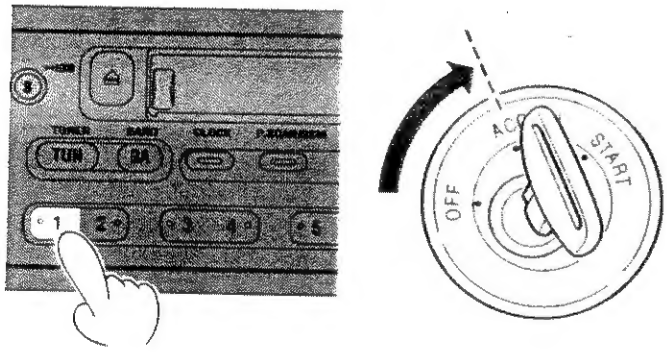
The seek tuning steps of the FM band for this unit can be switched between 100 kHz and 50 kHz per step (Initial setting 100 kHz).
Change it as required.

1.



Set the ignition switch to the OFF position.

2.



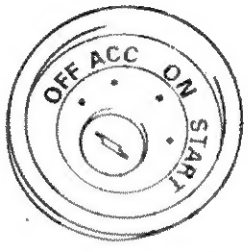
While pressing the button, set the ignition switch to the ACC or ON position.

- If seek tuning is performed in 50 kHz steps, a frequency before a broadcasting station frequency may be received. Tune in the station by performing manual tuning or seek tuning again.

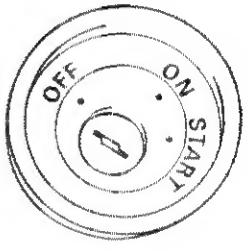
Connecting the Units

Note

- *This unit is for vehicles with a 12-volt battery and negative grounding. Before installing it in a recreational vehicle, truck, or bus, check the battery voltage.*
- *To avoid shorts in the electrical system, be sure to disconnect the battery ⊖ cable before beginning installation.*
- *Check whether installation and wiring have been completed correctly. Repalce the removed car components, then connect the end of the cable to the negative ⊖ terminal of the battery.*
- *Refer to the owner's manual for details on connecting the various cords of the power amp and other units, then make connections correctly.*
- *Secure the wiring with cable clamps or adhesive tape. To protect the wiring, wrap adhesive tape around them where they lie against metal parts.*
- *Route and secure all wiring so it cannot touch any moving parts, such as the gear shift, handbrake, and seat rails. Do not route wiring in places that get hot, such as near the heater outlet. If the insulation of the wiring melts or gets torn, there is a danger of the wiring short-circuiting to the vehicle body.*
- *Don't pass the orange lead through a hole into the engine compartment to connect to the battery. This will damage the lead insulation and cause a very dangerous short.*
- *Do not shorten any leads. If you do, the protection circuit may fail to work when it should.*
- *Never feed power to other equipment by cutting the insulation of the power supply lead of the unit and tapping into the lead. The current capacity of the lead will be exceeded, causing over heating.*
- *When replacing fuse, be sure to use only fuse of the rating prescribed on the fuse holder.*
- *When connecting a power amp, never connect the blue lead to the amp's power supply terminal. Also, when connecting an auto antenna, never connect the blue lead to the antenna's power supply terminal. Such connections may cause damage due to excessive current.*
- *When the unit is mounted in a vehicle whose ignition switch does not have the ACC (accessory) position as shown in figure, be sure to connect the red lead of the unit to the terminal controlled by the ignition switch ON/OFF position.*

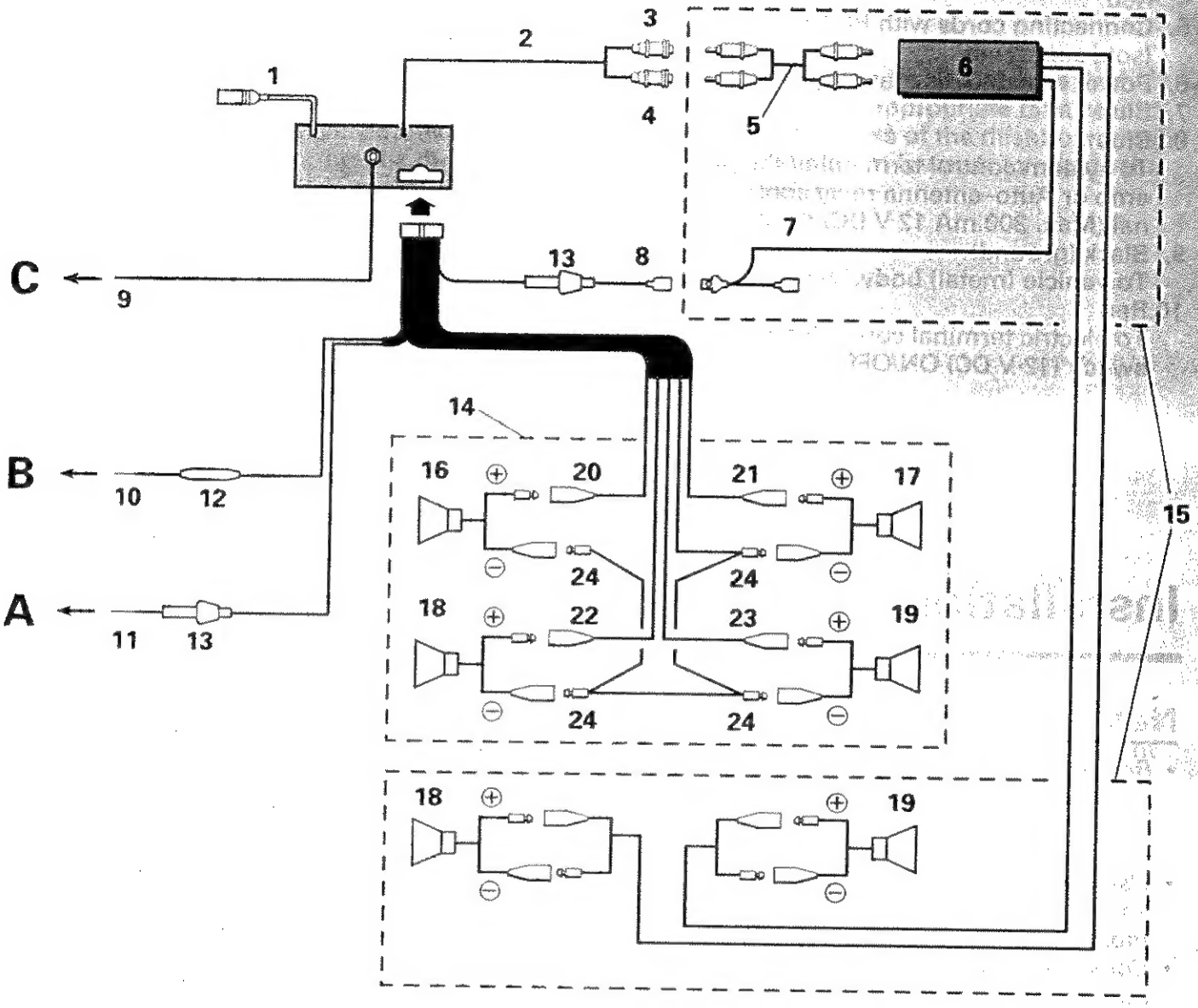


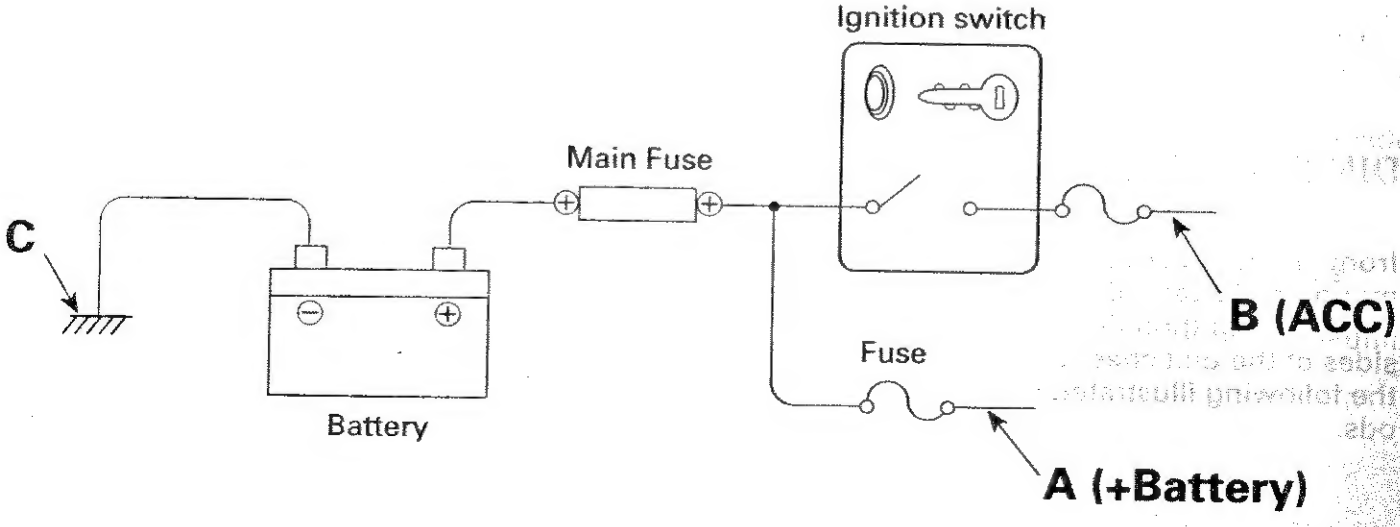
ACC position



No ACC position

Connection Diagram



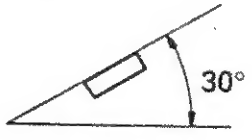


1. Antenna jack
2. Rear out
3. White
4. Red
5. Connecting cords with RCA pin plugs (sold separetely)
6. Power amp (sold separetely)
7. Blue
8. Blue
   To system control terminal of the power amp or Auto-antenna relay control terminal (Max. 300 mA 12 V DC).
9. Black (ground)
   To vehicle (metal) body.
10. Red
    To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
11. Orange
    To terminal always supplied with power regardless of ignition switch position
12. Fuse resistor
13. Fuse holder
14. With a 2 speaker system, connect to the 2 speakers in the front or the rear.
15. Use this for connections when you have the separately available amplifier.
16. Front/left speaker
17. Front/right speaker
18. Rear/left speaker
19. Rear/right speaker
20. Green
21. Gray
22. Green/red
23. Gray/red
24. Black

Installation

Note

- *Before finally installing the unit, connect the wiring temporarily and make sure it is all connected up properly and the unit and the system work properly.*
- *Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.*
- *Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.*
- *Install the unit where it does not get in the driver's way and cannot injure the passenger if there is a sudden stop, like an emergency stop.*
- *If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.*

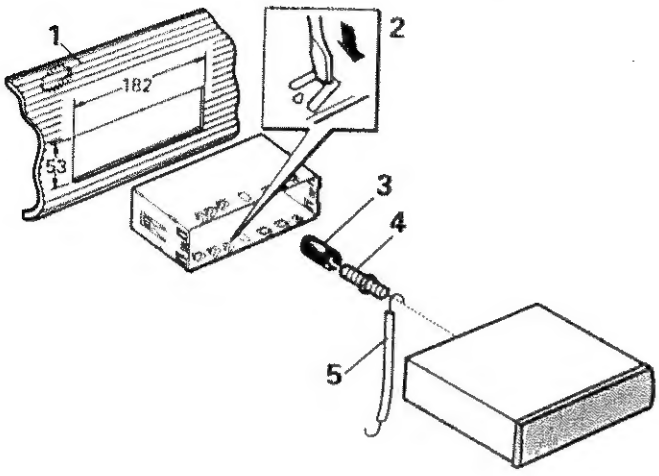


DIN Front/Rear-mount

This unit can be properly installed either from "Front" (conventional DIN Front-mount) or "Rear" (DIN Rear-mount installation, utilizing threaded screw holes at the sides of the unit chassis). For details, refer to the following illustrated installation methods.

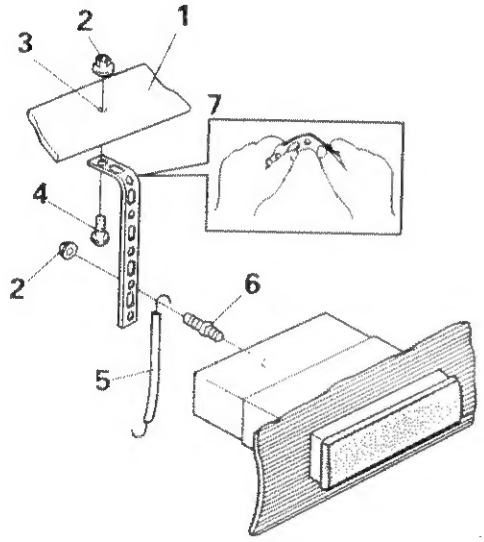
DIN Front-mount

Installation with the rubber bush



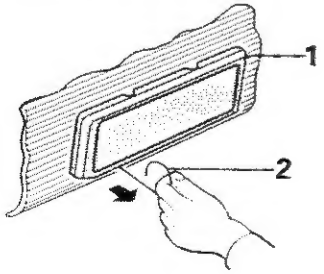
1. Dashboard
2. Holder
   After inserting the holder into the dashboard, select the appropriate tabs according to the thickness of the dashboard material and bend them inwards to secure the holder in place.
3. Rubber bush
4. Screw
5. Ground wire (black)

Installation without the rubber bush

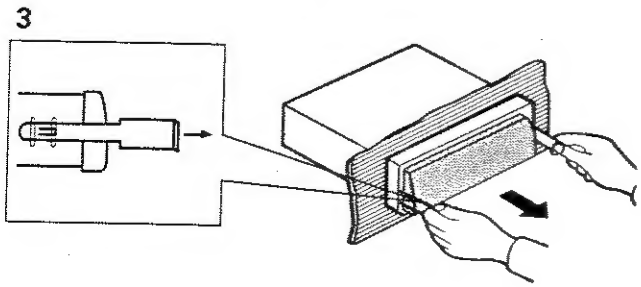


1. Dashboard
2. Nut (5 mm)
3. Drill a 5.5 — 6.0 mm diameter hole.
4. Screw (5 × 16 mm)
5. Ground wire (black)
6. Screw
7. Strap
   Be sure to use the strap to secure the back of the unit in place. The strap can be bent by hand to the desired angle.

Removing the unit



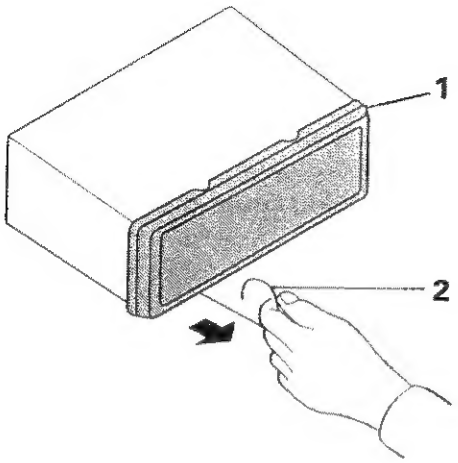
1. Frame
2. Insert the release pin into the hole in the bottom of the frame and pull out to remove the frame.
   (When reattaching the frame, point the side with a groove downwards and attach it.)
3. Lever
   Insert the levers supplied with the unit into the grooves at both sides of the unit as shown in figure until they click. Pulling the levers makes it possible to remove the unit from the dashboard.



DIN Rear-mount

Installation using the screw holes on the sides of the unit.

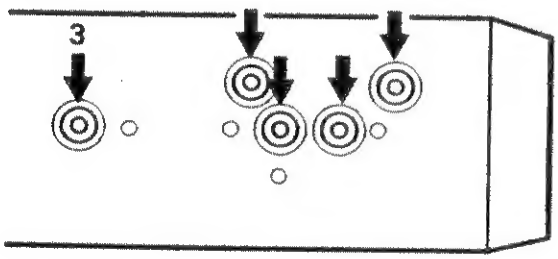
1.

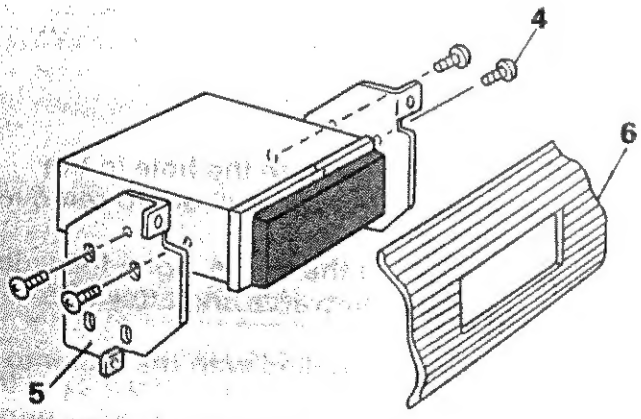


Remove the frame.

1. Frame
2. Insert the release pin into the hole in the bottom of the frame and pull out to remove the frame.
   (When reattaching the frame, point the side with a groove downwards and attach it.)

2.





Fastening the unit to the factory radio mounting bracket.

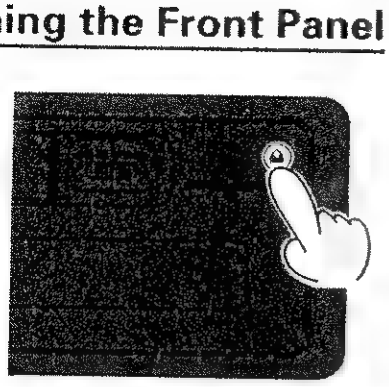
3. Select a position where the screw holes of the bracket and the screw holes of the main unit become aligned (are fitted), and tighten the screws at 2 places on each side. Use either truss screws (5 × 8 mm) or flush surface screws (5 × 9 mm), depending on the shape of the screw holes in the bracket
4. Screw
5. Factory radio mounting bracket
6. Dashbord or Console

Using the Removable Front Panel

The front panel of this unit can be removed as a theft deterrent.

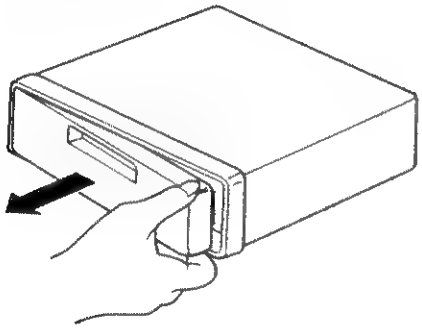
Detaching the Front Panel

1.



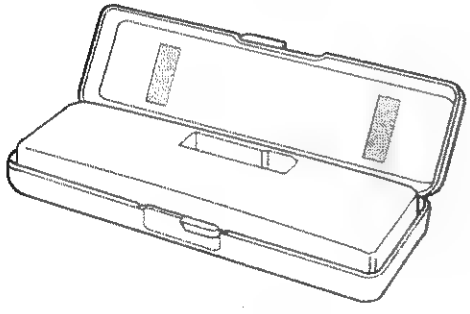
Press the ⏏ button.

2.



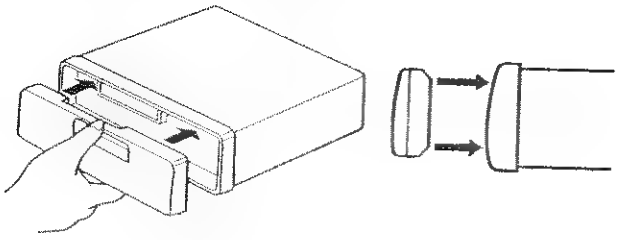
Take the right hand side of the panel and pull out.

3.



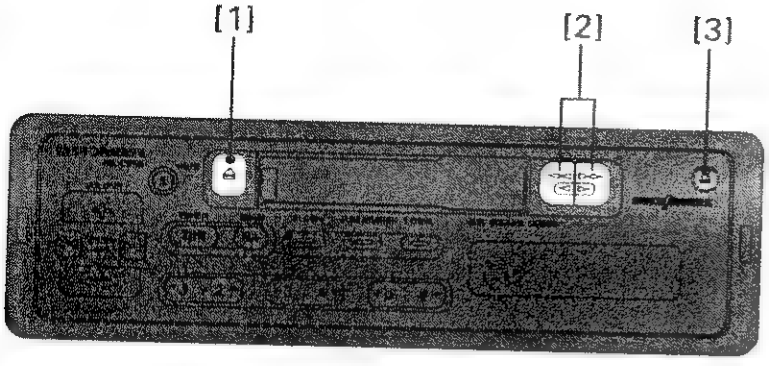
Place in the supplied case.

Replacing the Front Panel



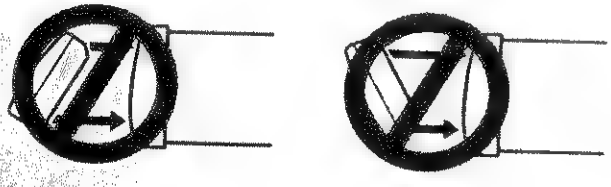
Push the front panel into the main body.

- *Do not install the front panel while holding down buttons [1], [2] or [3]. Doing so may destroy the buttons and the main unit.*

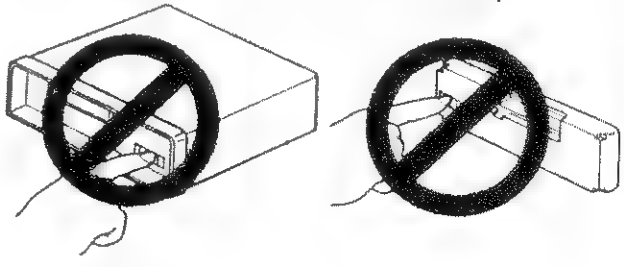


Note

- *Install the front panel holding it parallel to the main unit. Installing the panel tilted, as shown in the illustrations below, may cause the hook on the front panel to destroy the main unit's electrodes.*



- *Do not touch the contacts on the front panel or on the unit body, since this may result in poor electrical contact. If dirt or other foreign substances get on the contacts, wipe them with a clean, dry cloth.*

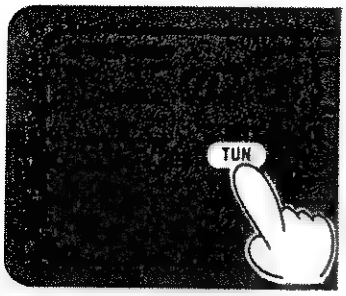


Precautions When Handling the Front Panel

- *Do not leave the front panel in any area exposed to high temperatures or direct sunlight.*
- *Do not drop the front panel or otherwise subject it to strong impact.*
- *Do not allow such volatile agents as benzine, thinner, or insecticides to come into contact with the surface of the front panel.*

Power ON/OFF

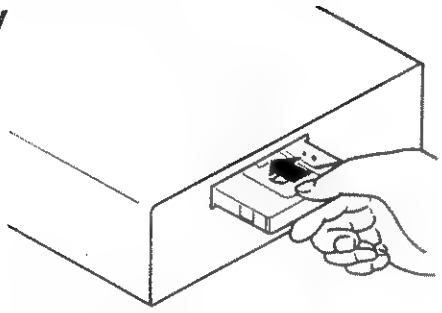
Radio



Press [TUN] button to switch on and off.

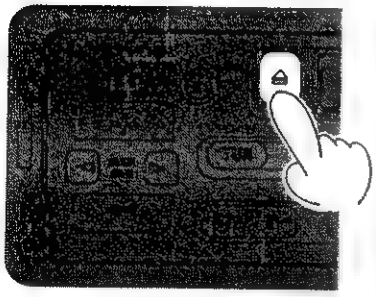
Tape

To play



Insert the cassette tape through the cassette door, and the tapes start to play.

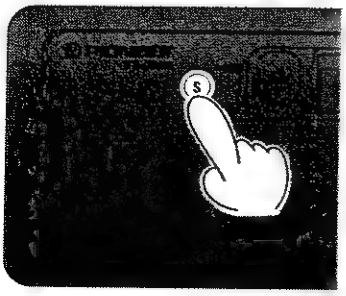
Eject



Press the ⏏ button.

Adjusting Volume and Tone

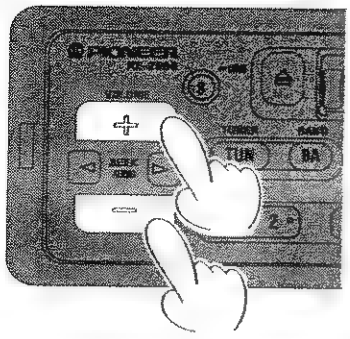
Mode Selection



Each press of [S] button changes the mode as follows:
Volume adjustment (V:) → Fader adjustment (F:) → Bass adjustment (B:)

- Fader, Balance, Bass and Treble settings stop temporarily at the center position.
- If no operations are performed within 8 seconds, adjustment modes are cancelled. Make adjustments within 8 seconds.

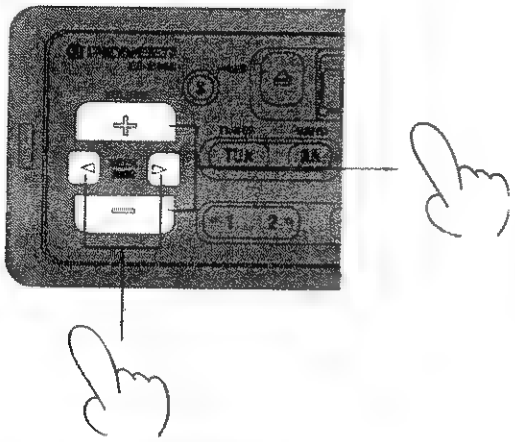
Volume



Pressing the [+] button increases the volume, while the [–] button decreases it.
(Display shows "V: 0" ~ "V: 31".)

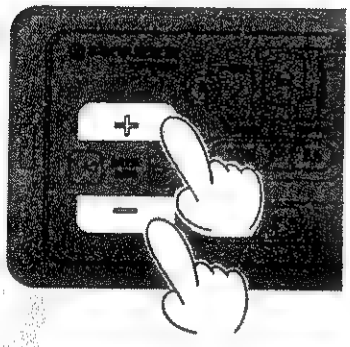
- *When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from outside.*

Fader/Balance



Press the [◄] or [►] button when in the Fader mode, and the Balance mode "B" is indicated in the display. Press the [+] or [–] button when in the Balance mode, and the display changes to "F", indicating that you have switched to the Fader mode.

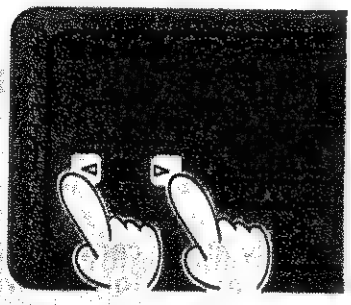
Fader



[+]: Raises front speaker volume
[–]: Raises rear speaker volume
(Display shows "F: F9" ~ "F: R9".)

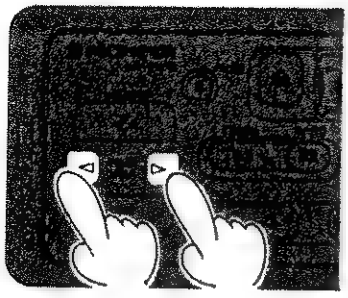
- Please set "F: 0" when using 2 speaker system.

Balance



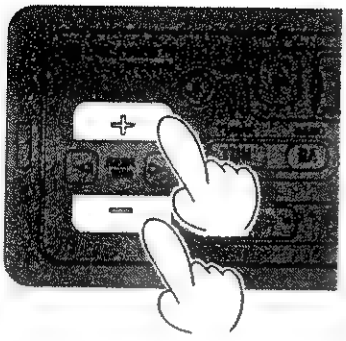
[►]: Raises right speaker volume
[◄]: Raises left speaker volume
(Display shows "B: L9" ~ "B: R9".)

Bass/Treble



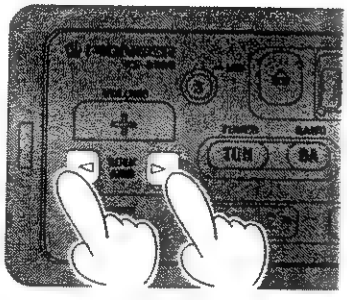
Press the [►] button when in the Bass mode, and the Treble mode "T" is indicated in the display. Press the [◄] button when in the Treble mode, and the display changes to "B" indicating that you have switched to the Bass mode.

Bass



[+]: Boosts
[–]: Attenuates
(Display shows "B: –6" ~ "B: 6".)

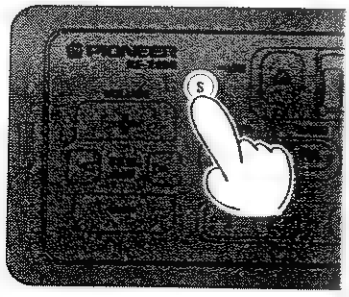
Treble



[+]: Boosts
[–]: Attenuates
(Display shows "T: –6" ~ "T: 6".)

Loudness

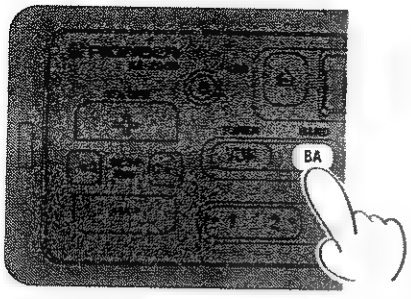
This "loudness" function enhances both the high and low ranges of sound to give even more power to output at low volume.



Press the [S] button for 2 seconds or more.
(The "LOUD" indicator appears on the display.)
To cancel Loudness, press the [S] button once again for 2 seconds or more.

Using the Radio

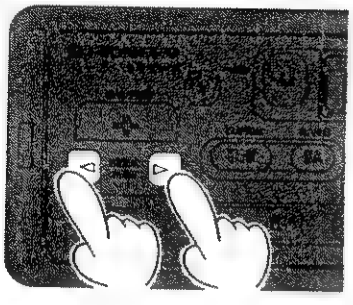
Selecting Band



Press [BA] button to select a band.

F I → F II → F III → A
(FM1) (FM2) (FM3) (AM)

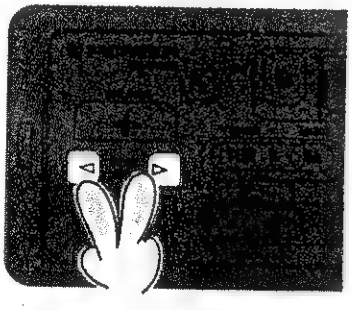
Seek Tuning



[◄]: Automatically selects a lower frequency station.
[►]: Automatically selects a higher frequency station.
("SEEK" lights in the display.)

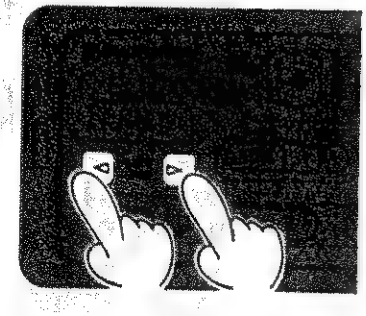
Manual Tuning

1.



Press both [◄] and [►] buttons at same time.
("SEEK" goes out in the display.)

2.



[◄]: Use to select lower frequencies.
[►]: Use to select higher frequencies.
Continue pressing the button to move up or down continuously through frequencies.

- *Tuning moves up or down in 50 kHz steps for FM, 9 kHz steps for AM.*
- *AM frequencies are tuned in 10 kHz steps after the tuning steps are changed.*

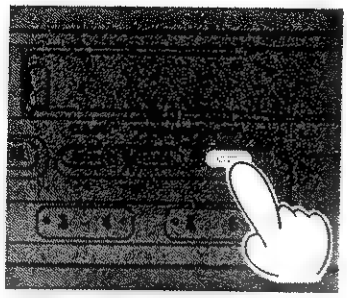
Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations.

The local setting also has 4 seek tuning sensitivity levels for FM and 2 levels for AM to match local conditions.

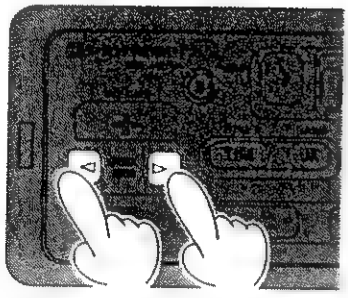
Changing the local seek sensitivity

1.



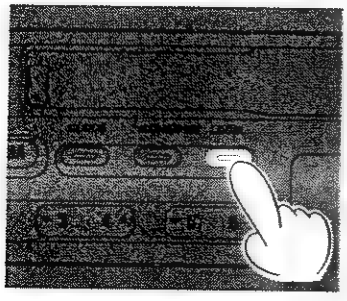
Select the desired band, and press the [LOCAL] button for 2 seconds or more.
(The local seek level is indicated in the display for about 5 seconds.)

2.



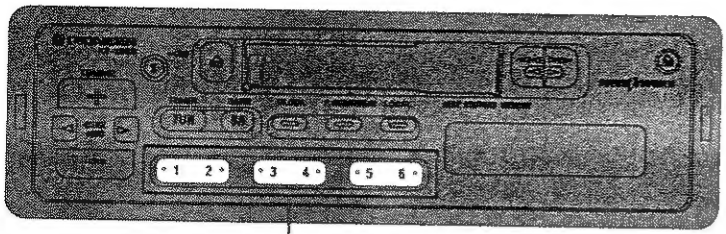
[►]: Raises sensitivity level.
[◄]: Lowers sensitivity level.
FM : L-1 = L-2 = L-3 = L-4
AM: L-1 = L-2
The L-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations. Adjust sensitivity while the local seek indication is displayed for 5 seconds.

Switching between local and DX



Press the [LOCAL] button.
Each time you press the button, you switch between local and DX.
Local position: "LOC.S" lights in the display.
DX position : "LOC.S" goes out in the display.

Preset Memory



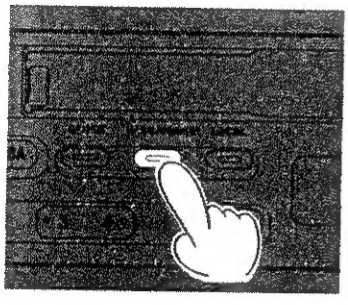
Preset button

Tune into the boradcast station you want to memorize, and press the desired preset button for 2 seconds or more.
FM: 18 stations can be memorized. (6 stations each for FM1, FM2 and FM3)
AM: 6 stations can be memorized.
Briefly press the preset button for the station that has been memorized. (The selected preset number lights in the display)

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the preset buttons [1 – 6], in order of strength.

It comes in handy when trying to find local stations while driving.

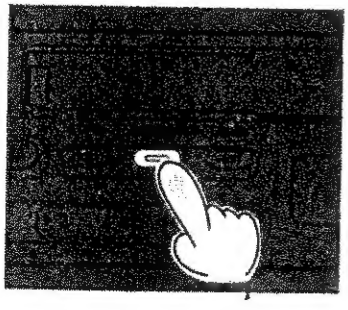


Select the desired band, and press the [BSM] button for 2 seconds or more.
("- - -" flashes in the display until BSM operation is completed)

- *If there are fewer than 6 strong stations in the area, some of the preset buttons will not be assigned frequencies, so they will retain any frequencies assigned to them previously.*
- *BSM search may take as long as 30 seconds in areas where there are few strong stations.*

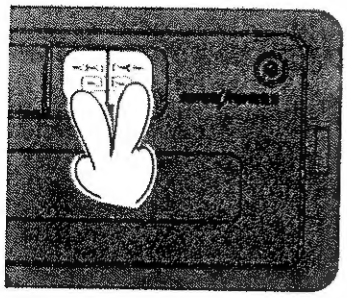
Preset Scan Tuning

This function lets you automatically monitor the stations assigned to the preset buttons.



Press the [P.SCAN] button.
Each station assigned to the preset buttons will be automatically tuned in for about 8 seconds.
When you hear a broadcast you want, press the [P.SCAN] button to stay tuned into it.

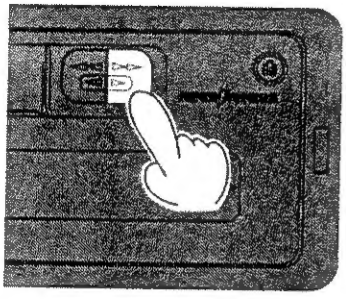
To Change Sides



Press the ◄◄ and ►► buttons at the same time.

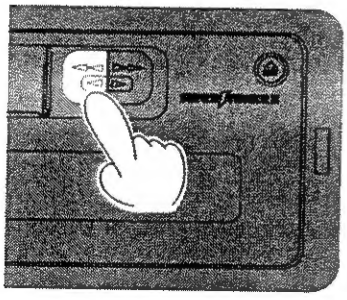
Fast Forward/Rewind

Fast forward



Press the button for the same direction as the tape play indicator.

Rewind

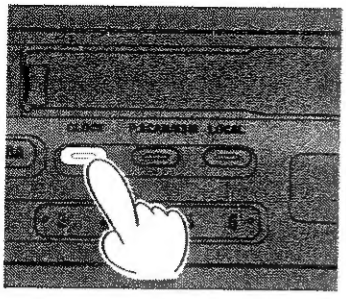


Press the button for the opposite direction as the tape play indicator.

- "◄ – – –► " will flash when the tape is fast forwarding or rewinding.

Using the Clock Display

Displaying the Time

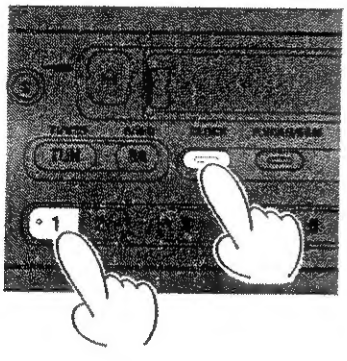


Press the [CLOCK] button.
(Clock indications are shown in the display)
Press the [CLOCK] button once more to cancel.

- The clock display can be used only when the main unit is in operation.
- When the clock display is ON, pressing other buttons will release the clock display. The display will be restored approximately 25 seconds after the button operation has been completed.

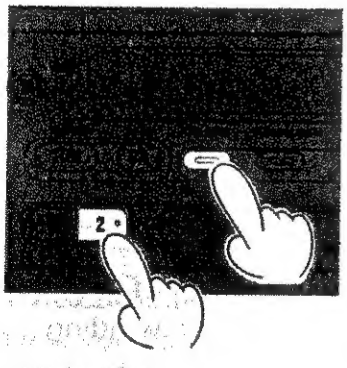
Adjusting the Time

Hours



While pressing the [CLOCK] button, press button [1] to set the hour.
Each press button [1], advances the hour setting by one hour, and holding it down advances the setting at high speed.

Minutes



While pressing the [CLOCK] button, press button [2] to set the minute.
Each press button [2], advances the minute setting by one minute, and holding it down advances the setting at high speed.

- Seconds are not displayed but when you stop pressing the [CLOCK] after setting the minute, seconds start from 0, so you can set seconds in this way from a clock, radio time signal or other time signal.

Specifications

General

Power source ..... 14.4 V DC (10.8 — 15.6 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 2.5 A
Dimensions
(DIN) (mounting size) ..... 178 (W) × 50 (H) × 150 (D) mm
(nose) ..... 188 (W) × 58 (H) × 15 (D) mm
(D) (mounting size) ..... 178 (W) × 50 (H) × 155 (D) mm
(nose) ..... 170 (W) × 48 (H) × 10 (D) mm
Weight ..... 1.3 kg

Amplifier

Continuous power output is 4.5 W per channel min. into 4 ohms, both channels driven 1 kHz with no more than 5 % THD.
Maximum power output ..... 8.5 W × 4 (EIAJ)
Load impedance ..... 4 Ω (4 — 8 Ω allowable)
Preout output level/output impedance ..... 500 mV/1 kΩ
Tone controls (bass) ..... ±12 dB (100 Hz)
(treble) ..... ±12 dB (10 kHz)
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz) (Volume: –30 dB)

Tape player

Tape ..... Compact cassette tape (C-30 — C-90)
Tape speed ..... 4.8 cm/sec.
Fast forward/rewind time ..... Approx. 100 sec. for C-60
Wow & flutter ..... 0.13 % (WRMS)
Frequency response ..... 50 — 14,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio ..... 52 dB (IEC-A network)

FM tuner

Frequency range ..... 87.5 — 108 MHz
Usable sensitivity ..... 11 dBf (1.0 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 16 dBf (1.7 µV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 50 — 14,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range ..... 531 — 1,602 kHz (9 kHz)
530 — 1,710 kHz (10 kHz)
Usable sensitivity ..... 18 µV (25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)
50 dB (±10 kHz)

Note:

Specifications and design are subject to possible modification without notice due to improvements.